

**STATEMENT OF BASIS
OAKLEY CITY
RENEWAL PERMIT: DISCHARGE, BIOSOLIDS & STORM WATER
UPDES PERMIT NUMBER: UT0020061
UPDES BIOSOLIDS PERMIT NUMBER: UTL-020061
MINOR MUNICIPAL**

FACILITY CONTACTS

Person Name:	Doug Evans	Person Name:	Bob Johnson
Position:	General Manager	Position:	Operator
Facility Name:	Oakley City Wastewater plant		
Mailing Address:	P.O Box 129 Oakley City, Utah 84055-0400		
Telephone:	(435) 640-4757		
Actual Address:	4449 Millrace Road Oakley City, Utah 84055		

DESCRIPTION OF FACILITY

The Oakley City treatment plant (OCTP) has a design capacity of 0.25 MGD. They use an activated sludge process for treatment. Raw wastewater is first treated using a 2 mm screen and compactor followed by grit removal. Following the grit removal system, the process water will enter an aeration basin and then directly into a Membrane Bioreactor (MBR) for microfiltration. The effluent from the MBR will enter an ultra violet disinfection system and then be discharged into the Weber River

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

In an effort to better address the needs of the watershed and increase efficiency, the DWQ has recently begun consolidating permits. Therefore, in addition to the Discharge provisions, the renewal permit for Oakley City will include provisions for storm water, biosolids and discharge.

Oakley City has constructed and put into operation a new treatment facility since the start of the last full permit cycle. Their limits and permit were modified in 2003 to reflect the new plant, and discharges related to it. In July 2003, discharge 001 was closed, and all future discharges from this location were eliminated. The new discharge point is through discharge 002.

This facility currently discharges wastewater into the Weber River and subsequently to Echo Reservoir, which is on Utah's 303(d) list of impaired waters. As required by the federal Clean Water Act a Total Maximum Daily Load study, or TMDL, has been developed for Echo Reservoir. The TMDL focuses on controlling those pollutants of concern (POC) that were identified during the Division of Water Quality's assessment process for waters of the state. POC's are identified where violations of water quality standards exist or defined methodologies indicate impairment to a

waterbody's defined beneficial use.

Specifically, Echo Reservoir has been identified as impaired based on low dissolved oxygen (DO) and high total phosphorus (TP) concentrations. A TMDL study for Echo Reservoir was submitted to EPA on April 1, 2006. The TMDL study concluded that TP must be controlled to restore and protect Echo Reservoir's Class 3A beneficial use (protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain). Future loading limits were identified in the TMDL to allow point source dischargers in the watershed sufficient time to develop plans to address TP, which may include, but are not limited to, trading of pollution (TP) credits.

Based on current population growth projections, Oakley City will begin to approach its load limit in 2013. In order to characterize the TP output of Oakley City's treatment system, twice monthly monitoring of TP will be incorporated into the current permit for the first two years of the cycle. After two years, monthly monitoring will be required. The TP loading limit set forth in the TMDL will not go into effect until Oakley City either begins to approach its load allocation or during the next permit cycle, whichever comes first.

DISCHARGE

DESCRIPTION OF DISCHARGE

The Oakley City has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. A summary of the data back through August 2003 is attached and there were no significant violations. Data previous to this month is no longer representative of the discharges from the new treatment plant.

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Located at latitude 40°39'06" and longitude 111°17'06". At the southwest corner of the six-cell lagoon complex and 2000 feet West of Oakley's Main Street on the southwest end of town. This Discharge has been eliminated.
002	Located at latitude 40°42'34" and longitude 111°17'59". 50 feet directly east of the new treatment facility south of Main Street on Millrace Road (1000 W).

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge is to the Weber River which is classified as 1C, 2B, 3A, and 4 (in that segment) according to *Utah administrative Code (UAC) R317-2-6 and R317-2-13.4*:

Class 1C	-Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water.
Class 2B	-Protected for secondary contact recreation such as boating, wading, or similar uses.
Class 3A	-Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.
Class 4	-Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS), biochemical oxygen demand (BOD₅), fecal and total

coliforms, pH and percent removal for BOD₅ and TSS are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. The oil and grease is based on best professional judgment (BPJ). The permit limitations are:

Parameter	Effluent Limitations			
	Maximum Monthly Average	Maximum Weekly Average	Daily Minimum	Daily Maximum
BOD ₅ , mg/L	25	35	NA	NA
BOD ₅ Min. % Removal	85	NA	NA	NA
TSS, mg/L	25	35	NA	NA
TSS Min. % Removal	85	NA	NA	NA
E. Coli, No/100mL	126	158	NA	NA
Oil & Grease, mg/L	NA	NA	NA	10.0
pH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable.

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are the same as in the previous permit. The permit will require reports to be submitted monthly and quarterly, as applicable, on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period. Lab sheets for biomonitoring must be attached to the biomonitoring DMR.

Self-Monitoring and Reporting Requirements *a			
Parameter	Frequency	Sample Type	Units
Total Flow *b *c	Continuous	Recorder	MGD
BOD ₅ , Influent *d	Monthly	Grab	mg/L
Effluent	Monthly	Grab	mg/L
TSS, Influent *d	Monthly	Grab	mg/L
Effluent	Monthly	Grab	mg/L
Total Phosphorus *e	2 x Monthly/Monthly	Grab	mg/l
E. Coli, No/100mL	Monthly	Grab	No./100mL
Oil & Grease *f	Monthly	Grab	mg/L
pH	Monthly	Grab	SU

*a See Definitions, *Part VII*, of Permit for definition of terms.

*b Flow measurements of influent/effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

*c If the rate of discharge is controlled, the rate and duration of discharge shall be reported.

*d In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for this constituent in the discharge

*e Oakley will Sample 2 times a month for the first 36 months of the permit, then step down to monthly starting August 2009.

*f Sample when sheen is visible

BIOSOLIDS (SEWAGE SLUDGE)

DESCRIPTION OF TREATMENT AND DISPOSAL

The OCTP is expected to dispose of approximately twenty five dry metric tons (DMT) of wastewater solids (sewage sludge) per year. The wastewater solids will be stabilized during the MBR process with an average retention time of over 60 days. The wastewater solids from the MBR process will be de-watered with a belt press. All sludge from the OCTP will be disposed of in the Summit County landfill.

SOLIDS MONITORING REQUIREMENTS

Under *40 CFR 503* solids are not required to be monitored for heavy metals content or pathogen reduction if the solids are disposed in a landfill.

LANDFILL MONITORING

Paint Filter Test

Under *40 CFR 258*, landfill monitoring requirements, the solids will need to pass a paint filter test before the solids are disposed of in a landfill. If the solids do not pass a paint filter test, the solids cannot be disposed in a landfill.

Vector Attraction Reduction Monitoring

Under *40 CFR 503.33*, the solids need to meet a method of vector attraction reduction (VAR). Since the solids will be disposed of at the Summit County Landfill, Oakley City will need to insure that the solids are covered daily with soil or another approved material. If the solids are not covered daily, the solids cannot be disposed in the landfill.

Minimum Frequency of Monitoring	
Amount of Solids Disposed Per Year	Monitoring Frequency
> 0 to < 290, DMT	Once per year

Since the OCTP is not expected to produce more than 290 DMT of solids per year, the OCTP will be required to monitor at least once per year for the paint filter tests.

RECORD KEEPING

The record keeping requirements from *40 CFR 503.17* are included under *Part III.F.* of the permit. Since the solids are disposed in a landfill the records need to be retained for a minimum of five years.

REPORTING

The OCTP needs to submit an annual solids report as required in *40 CFR 503.18*. This report is to include the results of all solids monitoring performed in accordance with *Part III.C.* of the permit, information on management practices, solids treatment, and certifications. This report is due no later than February 19 of each year. Each report is for the previous calendar year.

STORM WATER

STORMWATER REQUIREMENTS

The *Utah Administrative Code (UAC) R-317-8-3* requires storm water permit provisions to include the development of a storm water pollution prevention plan for waste water treatment facilities if the facility meets one or both of the following criteria.

1. waste water treatment facilities with a design flow of 1.0 MGD or greater, and/or,
2. waste water treatment facilities with an approved pretreatment program as described in *40CFR Part 403*,

Oakley City does not meet one of the above criteria; therefore this permit does not include storm water provisions. The permit does however include a storm water re-opener provision.

PRETREATMENT REQUIREMENTS

The permittee has not been designated for pretreatment program development because it does not meet conditions which necessitate a full program. The flow through the plant is less than five (5) MGD, there are no categorical industries discharging to the treatment facility, industrial discharges comprise less than 1 percent of the flow through the treatment facility, and there is no indication of pass through or interference with the operation of the treatment facility such as upsets or violations of the POTW's UPDES permit limits.

BIOMONITORING REQUIREMENTS

As part of a nationwide effort to control toxic discharges, biomonitoring requirements are being included in permits for facilities where effluent toxicity is an existing or potential concern. In Utah, this is done in accordance with the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity (WET) Control (biomonitoring)*. Authority to require effluent biomonitoring is provided in *Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317 -2-7.2*.

The permittee is a minor municipal discharger that will be contributing a small volume of effluent to the existing stream flow, in which toxicity is not likely to be present. Based on these considerations, and the fact that receiving stream water quality monitoring data indicate no impairment of the stream, there is no reasonable potential for toxicity in the permittee's discharge (*per State of Utah Permitting and Enforcement Guidance Document for WET Control*). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
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Utah Division of Water Quality

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TMDL Section Date